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Catherine Callens

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EXAMINER

PALABRICA, RICARDO J

ART UNIT

PAPER NUMBER

3663

MAIL DATE

DELIVERY MODE

11/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

DETAILED ACTION

1. Applicant's 9/8/08 Amendment, which directly amended claim 14, canceled claims 23-25, added new claim 26, and traversed the rejection of claims in the 3/4/08 Office action, is acknowledged.

Applicant's arguments with respect to rejected claims have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14-18 and 26 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claims 14 and 26 recite the limitation:

"calculating an expected falling speed of the control rods upon entry into the lower damping portions ...".

Applicant himself admits that there is a plurality of control rods (e.g., 24) and a plurality of corresponding guide tubes, each tube having a lower damping portion. It is inherent that not all of these rods and not all of the guide tubes and their lower portions have exactly the same physical attributes, e.g., length, diameter, weight, straightness, and fit. Additionally, these rods are not exposed to exactly the same temperature, pressure and flow conditions during operation. Accordingly, not all of these rods will have the same falling speed upon entry into said lower portions.

There is neither an adequate description nor enabling disclosure as to what is meant by or what is all encompassed by the clause “expected falling speed of the control rods upon entry into the lower damping portions.” There is also no support as to how one determines the so-called expected falling speed from among the inherent plurality of speeds resulting from said different rod attributes and different conditions to which the rods are subjected in a reactor.

3. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The new matter pertains to the claimed “method for designing a part of a fuel assembly.” The as-filed disclosure pertains to a method for designing a complete nuclear fuel assembly, as shown, for example, in applicant’s Fig. 1. Part of a fuel

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assembly is a different species from a complete fuel assembly. Thus, claim 26 is directed to a different species of applying the method.

4. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

There is no support for the method for designing a part of the fuel assembly.

Also, there is neither an adequate description nor enabling disclosure as to how and in what manner designing only a part of the fuel assembly can achieve the intended result of designing a complete fuel assembly.

5. Claim 26 is rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The steps of designing the remaining parts of the fuel assembly, which are critical or essential to the practice of the invention to designing an entire or complete fuel assembly, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

6. Claims 14-18 and 26 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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. Claims 14-18 are vague, indefinite and incomplete, and their metes and bounds cannot be determined, particularly in regard to the term “expected falling speed.” It is not known what all is meant by or encompassed by this term.

Claim 26 is vague, indefinite and incomplete, and its metes and bounds cannot be determined because there is no support for the species of the method for designing a part of a fuel assembly, and how said partial method is applied to achieve the design of a complete or entire assembly.

7. Claim 26 is rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The omitted steps are: steps to designing the other parts of a fuel assembly to make a complete design of an entire or total assembly.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rick Palabrica whose telephone number is 571-272-6880. The examiner can normally be reached on 6:00-4:30, Mon-Thurs.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 5, 2008

/Rick Palabrica/
Primary Examiner, Art Unit 3663

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